

PUC-86-030-RL
7-2500-723-2
E-017/GR-86-380

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

in the Matter of the Petition
of Otter Tail Power Company
OF FACT,
for Authority to Change Its
AND
Schedule of Rates for Electric
RECOMMENDED ORDER
Utility Service in the State
I
of Minnesota

FINDINGS

CONCLUSIONS

PART

The above-captioned matter came on for hearing in Fergus Falls before Rich and C. Luis, Administrative Law Judge for the Office of Administrative Hearings, on November 24, 1986. The hearing continued in Fergus Falls on November 25 and 26, and in St. Paul on December 1-4, 1986.

Due to the extended scope of this proceeding, the need to afford the parties an adequate period for filing exceptions and the time within which the Commission must issue its final Order, the Findings of Fact, Conclusions and Recommendation of the Administrative Law judge will be issued in two parts. Part I includes all issues other than Rate Design, 1986 Tax Law Effects and Otter Tail's Conservation Program. Part II will consider those areas and will include a Recommended Order.

Public hearings for the purpose of receiving comments and questions from affected ratepayers were held as follows (number of public witnesses):

October 14, 1986 - Hallock (1)
October 15, 1986 - Crookston (6)
October 20, 1986 - Canby (3)
October 21, 1986 - Morris (3)
October 22, 1986 - Fergus Falls (afternoon and evening hearings) (3)

At the six public hearings, attended by a total of approximately 125 people,

16 persons testified.

Appearances at the evidentiary hearing were as follows:

Katherine E. Sasseville, General Counsel, and Jay D. Myster, Vice President, Governmental Relations and Law, Otter Tail Power Company, 215 South Cascade Street, Fergus Falls, Minnesota 56537, appeared on behalf of Otter Tail Power Company; Christopher K. Sandberg and Ann M. Seha, Special Assistant Attorneys General, 1100 Bremer Tower, Seventh Place and Minnesota Street, St. Paul, Minnesota 55101, appeared on behalf of the Minnesota Department of Public Service; Dennis D. Ahlers, Special Assistant Attorney General, 340 Bremer Tower, Seventh Place and Minnesota Street, St. Paul, Minnesota 55101, appeared on behalf of the Office of Attorney General--Residential Utilities Division; Elizabeth V. Cutter, Special Assistant Attorney General, 1100 Bremer Tower, Seventh Place and Minnesota Street, St. Paul, Minnesota 55101, appeared for

,he Minnesota Department of Energy and Economic Development;
James D. Larson,
Wurst, Pearson, Hamilton, Larson & Underwood, 1100 First Bank
Place West,
Minneapolis, Minnesota 55402, appeared on behalf of Superwood Corporation,
AG Processing, Inc., Barrel O'Fun, Land O'Lakes, Inc.,
Northwood Panelboard
Company, Tuffy's Pet Foods and West Central Turkeys, Inc.
(collectively called
Superwood, et al.) Janet F. Gonzalez, Case Manager, and Analysts Louis
Sickmann and Paul Schweizer, Seventh Floor, American Center
Building, 160 East
Kellogg Boulevard, St. Paul, Minnesota 55101, for the Minnesota
Public
Utilities Commission staff.

The record herein closed on February 12, 1987.

Notice is hereby given that, pursuant to Minn. Stat. 14.61,
and the
Rules of Practice of the Public Utilities Commission and the Office of
Administrative Hearings, exceptions to this Report, if any, by any party
adversely affected must be filed within 20 days of the mailing date hereof
with the Executive Secretary, Minnesota Public Utilities
Commission, 160 East
Kellogg Boulevard, St. Paul, Minnesota 55101. Exceptions must
be specific and
stated and numbered separately. Proposed Findings of Fact, Conclusions
and
Order should be included, and copies thereof shall be served upon all
parties. If desired, a reply to exceptions may be filed and
served within ten
days after the service of the exceptions to which reply is
made. Oral
argument before a majority of the Commission will be permitted to all
parties
adversely affected by the Administrative Law Judge's recommendation who
request such argument. Such request must accompany the filed
exceptions or
reply, and an original and 13 copies of each document should be
filed with the
Commission.

The Minnesota Public Utilities Commission will make the final
determination of the matter after the expiration of the period for
filing
exceptions as set forth above, or after oral argument, if such
is requested
and had in the matter.

Further notice is hereby given that the Commission may, at its
own
discretion, accept or reject the Administrative Law Judge's
recommendation and
that said recommendation has no legal effect unless set presently
adopted by the
Commission as its final order.

STATEMENT OF ISSUES

Whether Otter Tail Power Company should be authorized to increase its rates for electric utility service to customers in Minnesota by \$1 1 , 873 038 and to collect those revenues in accordance with the rate design proposed by Otter Tail Power herein.

Based upon all of the proceedings herein, the Administrative Law Judge makes the following:

FINDINGS OF FACT

Jurisdiction and Procedural History

1. On June 26, 1986, Otter Tail Power Company (OTP, Company or Utility) filed a Petition with the Minnesota Public Utilities Commission (Commission) for an increase in electric rates. The Petition requested an annual

jurisdictional rate increase of \$13,831,243 (17.6 percent). The Company also filed a request for interim rates in the amount of \$12,606,922, a 16.03 percent increase.

2. On June 30, 1986, the Commission accepted the filing, ordered an investigation and hearing to determine the reasonableness of the proposed rates, and suspended the proposed rates until the Commission reaches a Determination as to the reasonableness of OTP's proposal, or until April 27, 1987, whichever occurs first.

3. On July 1, 1986, the Commission issued its Order Setting Interim Rates in this matter. The interim revenue deficiency determined by the Commission was \$11,208,682, including a 14.29 percent increase to residential ratepayers, to be billed beginning with energy used on and after July 1, 1986. The actual annual interim increase is \$10,782,984. The lesser amount results because OTP's rate design did not apply the authorized increase to the Controlled Service Rate and the Bulk Interruptible Rate. The Company is collecting interim rate revenues subject to possible refund if interim rates are in excess of the final rates determined by the Commission.

4. On July 25, 1986, the Commission issued a Notice and Order for Hearing directing that a contested case hearing be held to determine the reasonableness of the rate changes proposed by the Company.

5. On August 4, 1986, a Prehearing Conference was held before the Administrative Law Judge in Minneapolis. Petitions to intervene were filed by the Minnesota Department of Public Service (DPS), the Residential Utilities Division of the Office of Attorney General (OAG), the Minnesota Department of Energy and Economic Development (DEED) and a consortium of Large General Service Industrial intervenors (Superwood, AG Processing, Barrell O'Fun, Land O'Lakes, Northwood, Tuffy's, and Nest Central Turkeys, collectively referred to as Superwood, et al. (SUP)). All of the Petitions to Intervene were accepted.

6. On August 25, 1986, the Administrative Law Judge issued a Prehearing Order establishing procedural rules and a schedule for the filing of testimony and hearings.

7. On November 20, 1986, the Administrative Law Judge issued Prehearing Orders regarding questions raised by the parties on burden of proof in this proceeding. Those Orders provided:

1. The quantum of proof required in this case is that of proof by a preponderance of the evidence; and

2. The Company, having the duty to establish that its requested

rates are just and reasonable, has the burden of establishing by a preponderance of the evidence every fact asserted to support the justness and reasonableness of its requests; and

3. If the Company produces substantial evidence on a fact asserted to establish the justness and reasonableness of its requests, and that evidence is not refuted by cross-examination or Intervenor's direct evidence, then the Company has proven that fact by a preponderance of the evidence; and

4. If an Intervenor introduces substantial evidence as to a relevant factual matter not addressed in the Company's case, then the Intervenor shall be deemed to have met a burden of production and the Company bears the burden of ultimate persuasion by a preponderance of the evidence. The burden of ultimate persuasion is always on the Company.

Otter Trail Power Company

8. Otter Tail Power Company is an investor-owned electric utility headquartered in Fergus Falls, Minnesota. It has approximately 124,000 customers in Minnesota, of which approximately 92,000 are residential. Within Minnesota, the Utility supplies electric power to 155 communities, and the surrounding rural areas, scattered throughout a large area of western Minnesota between the Canadian border and the second tier of counties (Pipestone, Murray, Cottonwood) north of the Iowa line. This service area is large but sparsely populated, so transmission line costs are significant.

Most of the communities served by OTP are very small (the average population of towns on the Company's system is 270). Otter Tail serves territories with similar demographic characteristics in eastern North Dakota and northeast South Dakota. Most of the Utility's power comes from lignite coal-fired generating stations, including its own Hoot Lake (North Dakota) plant and the Coyote (North Dakota) and Big Stone (South Dakota) plants it partially owns.

9. The area served by this utility is heavily dependent upon the agricultural economy. Most of the small towns served by CTP are economically based on services provided to the surrounding rural community, and do not have other industries of appreciable size to diversify their economic bases. For the last few years, land values in the service territory have declined, commodity prices have been depressed and many farms and farm-related enterprises have lost money or gone out of business.

10. OTP is a winter-peaking company with a substantial electric heating load. However, the Company forecasts no peak load growth for several years.

Summary of Public- Testimony

11. The majority of the speakers at the public hearings were elected officials from small towns in the service area, who spoke for their municipalities and the situations faced by their citizenry, and small business owners in those towns who use significant amounts of electricity (grocers, hotel and restaurant owners). Concerns were expressed by and for senior citizens and other persons on fixed incomes. The general comment was that the requested increases in rates were too high. Letters of comment received by the Administrative Law Judge (Exhibit 107) expressed the same general concerns.

as those raised by public hearing witnesses.

12. Small business persons in the towns that constitute OTP's service area are already losing the business of significant numbers of persons who live in their service area but who chose to trade in the region's larger communities. Public witnesses are concerned that that problem will be exacerbated by OTP's rate hike because they already pay rates higher than those paid by their competitors in those larger communities (most of which are served by municipal utilities or electric co-ops), which increases must be absorbed or passed on as price increases.

13. Several witnesses questioned OTP's rate structure, stating that the range of rate categories should change so that small demand customers could get "cheaper" power.

14. Several witnesses raised concern over whether the ratepayers had to pay for the Spiritwood land acquisition. They also questioned the 14.85 percent requested rate of return on equity in a climate of declining interest rates. Others raised the issue of lower taxes, arguing that the new tax laws should drop the Company's revenue requirements. Some persons took issue with a 17.6 percent boost in rates (and with the interim hike of 14.29 percent) because it was much higher than current annual inflation.

15. One person questioned the appropriateness of OTP's representation by Katherine Sasseville, a former Public Utilities Commissioner and Commission Chairperson in Minnesota. OTP President John MacFarlane pointed out to the witness that Counsel had been in private law practice for several years after leaving the Commission before she joined the Company, and that none of Ms. Sasseville's former colleagues on the Commission have been in office during the pendency of this proceeding.

16. The DPS sent spokespersons (Brad Moore, Luther Thompson, Richard Lancaster, William Lang) to each public hearing. These people announced that the Department was recommending a 8.9 percent rate hike for residential customers and a 12 percent rate of return on equity.

17. Most of the witnesses who spoke on the subject praised the quality of OTP's service and acknowledged that Otter Tail service personnel were talented, involved, knowledgeable members of their communities. President MacFarlane and Vice Presidents Myster and William Glesen (Minnesota operations), along with regional managers and service personnel, attended each public hearing. Those officials briefed the public in attendance on OTP's requests and responded to concerns raised by the persons attending.

18. Commissioner Beerhalter attended the public hearings in Hallock, Crookston, Morris and Fergus Falls. Commissioner Peterson attended in Canby. The Commissioners briefed the public on the Commission's role in the process.

Test Year

19. The appropriate test year for determining the Company's revenue deficiency, if any, is the 12-month period from July 1, 1986 to June 30, 1987, as filed by the Company. No party challenged the appropriateness of this test year as representative of the future period during which rates will be in effect.

Rate Base

jurisdictional Allocation and Accumulated_Degreciation

20. The Company submitted a jurisdictional cost of service study. No party opposed the underlying cost of service study or the various factors inherent in it. OTP's originally-filed Minnesota average jurisdictional rate base for the test year was \$186,965,996. This figure was 52 percent of the Company's system-wide rate base for the test year.

21 By Order of July 25, 1986, the Commission directed Otter Tail I to provide information on depreciation relating to a property shift into the Minnesota Jurisdiction. OTP's jurisdictional allocation study showed that, since the time of the data gathering for the last allocation study, a further shift had occurred, based on increased system use by Minnesota customers in relation to customers in other jurisdictions. Otter Tail Power had not shifted depreciation reserves associated with this property shift. OTP had purchased an additional 28 MW increment of the Big Stone generating station in March, 1986. The additional capacity was paid for in a cash-property transfer transaction. The property traded as part of the purchase price was not part of OTP's Minnesota rate base.

The Company proposed that the determination of the depreciation reserve amount to be transferred be determined based upon the allowed depreciation practices of the jurisdiction that received an increase in allocated property. No party opposed this method of determining the appropriate reserve amounts for the transferred property, which resulted in an adjustment to accumulated depreciation. The rate base level finally proposed by Otter Tail Power Company in this matter is \$177,910,503.

22 . DPS witness Willi am Lang made appropriate, uncontested adjustments

which include resulting al location impacts on all other rate base and operating statement items. Collectively, they reduce the originally-proposed Minnesota rate base by \$7,994,740 and increase the total available for return on the operating statement by \$271,702. These adjustments are found to be reasonable and appropriate.

Recovery of Spiritwood Costs

23. During the late '70s, OTP determined that it had a need for additional future capacity. In 1979, the Company decided to build and operate a 125 MW generating facility next to one of its customers, the Latish Malting Company, in Spiritwood Township, near Jamestown, North Dakota. The generating facility was to produce both electricity and steam. Otter Tail planned to begin construction in April 1983, and to have the plant operational by September 1986.

24. Otter Tail chose the Spiritwood site because it offered a cogeneration alternative and was determined to be the least cost available option due to smaller size, existing transmission plant, and its capability of providing a recapture of 50 MW of electric capacity by providing steam heat as a substitute for electricity for Latish Malting.

25. Beginning in 1980, OTP began to purchase the land for the Spiritwood plant. The Company purchased 1,460 acres of land for the 125 MW plant, paying \$2,240 per acre (\$3,270,400) for that land.

26. In March of 1981, OTP requested certification from the North Dakota Public Utilities Commission to build the Spiritwood plant. Otter Tail also asked for three commitments from the North Dakota Commission, namely: (1) recognition of the need for a market-to-book ratio of one; (2) allowance of construction work in progress; and (3) allowance of cost of service indexing. The North Dakota agency issued a certificate of need for construction for the plant, but refused to give the specified assurances OTP had requested.

27. In the early 1980s, a declining rate of load growth caused the Company to re-evaluate its need for proceeding on the original schedule for construction of the Spiritwood plant. Company management decided in 1981 to delay construction at Spiritwood, and, on September 20, 1982, the Company's Board of directors voted to delay completion of the plant from 1986 to 1990.

28. During 1984, Latish Malting Company decided to obtain energy from another fuel source, natural gas.

29. In December 1984, OTP's board of directors voted to abandon the Spiritwood project. Construction was never commenced, the site remains empty, and the land is still owned by a non-utility subsidiary of OTP. As a result of the Company's decision to abandon the project, \$6,235,850 of total project costs were transferred from a construction work in progress account to a deferred rate base account.

30. In 1984, after Latish's decision to convert to natural gas, and pursuant to the transfer of the land to its subsidiary, OTP had the 1460 acres in question appraised. The land was appraised at \$375 per acre (\$547,500).

31. The presence of Latish Malting and the anticipated recapture of its 50 MW usage of electricity (through recovery of that quantity of steam) was the most important reason for selecting Spiritwood as the plant site. The presence of Latish on the property adjacent to the Spiritwood land acquisition made Spiritwood the most economical generating alternative for OTP.

32. The Spiritwood land is still owned by OTP's subsidiary, and the Company has not attempted to sell it or to sell it back to the original owners.

33. The Company seeks the following treatment of the Spiritwood transactions in this rate case- the Minnesota jurisdictional unamortized balance of the Spiritwood project (\$2,606,896) should be included in test year rate base; the related accumulated deferred income tax (ADIT) to be offset against the Spiritwood balance is \$772,945. Therefore, the net rate base effect is \$1,833,951. The Company also seeks allowance of \$1,042,759 in test year expenses, to be reflected on the operating income statement adopted in this case as "Spiritwood amortization".

34. Otter Tail Power last filed for a general rate increase in Minnesota in 1981 (Docket No. E-017/GR-81-315). Among the items of rate base claimed by the Company in that filing was construction work in progress costs for the Spiritwood project. In its June 15, 1982 Order, at pages 4-5, the Commission found that the expenditures for the project were properly classified as

preliminary survey and investigation charges ("PS&I"). The Commission found that such charges might not result in construction of a plant and, due to that and other uncertainties surrounding the Spiritwood project, the costs should not be placed into the Company's rate base. The fact that the project had then been delayed three times, that a "substantial" number of permits were still needed, and that the land acquisition was not then complete were of specific concern to the Commission.

35. The expenditure of investor capital for planning and engineering for anticipated plant capacity is made to provide customers with adequate and reliable service in the long run, and therefore is an expenditure which is

used and useful to ratepayers. Monies spent on planning and engineering for the Spiritwood project were prudently spent because the project's necessity was reasonably foreseeable in the late 1970s and early 1980s.

36. It would not be fair and reasonable to allow OTP to earn a return from its ratepayers on its Spiritwood investment. The property was never used for a public purpose by Otter Tail Power, nor is it presently useful in rendering service to the public. The monies spent in acquiring the property were not prudent costs of acquisition. The rate case treatment sought by the company, as specified at Finding 33, should be disallowed with respect to costs involving the acquisition of land and other expenses, except for planning and engineering.

37. Monies spent on planning and engineering prior to abandonment of the Spiritwood project were prudently spent. Therefore, the Minnesota jurisdictional unamortized balance of the Spiritwood project to be included in test year rate base is \$1,202,753. The related ADIT to be offset against the Spiritwood balance is \$356,616. The net rate base effect is \$846,137. The operating statement effect is \$481,102. These figures accept as accurate OTP's 8.9 percent allocation factor to nonutility (thermal energy recapture operations. See Attachment A to Otter Tail's Initial Brief.

DISCUSSION

Minn. Stat. 216B.16, subd. 6 provides, in relevant part:

The commission . . . shall give due consideration to the public need for adequate, efficient, and reasonable service and to the need of the public utility for revenue sufficient to enable it to meet the cost of furnishing the service, including adequate provision for depreciation of its utility property used and useful in rendering service to the public, and to earn a fair and reasonable return upon the investment in such property. In determining the rate base upon which the utility is to be allowed to earn a fair rate of return, the commission shall give due consideration to evidence of the cost of the property when first devoted to public use, to prudent acquisition cost to the public utility less appropriate depreciation on each, to construction work in progress, to offsets in the nature of capital provided by sources other than investors, and to other expenses of a capital nature

It is recommended that rate recovery be allowed for planning and engineering costs borne by OTP in connection with the Spiritwood project, but not for land acquisition and other expenses.

Planning and engineering expenses in connection with Spiritwood were prudently spent. The cost of furnishing service to the public over the long run requires that investor capital be expended on planning and engineering for projects which are not built. It is not possible to plan only for events and projects which are successful. If investors are allowed to recover only for projects which become operating facilities, and not for prudently planned projects, then investors will seek compensation for the added risk through higher costs of capital. It is not prudent to wait only until the need for

aiding capacity is imminent. If a utility operated in that fashion, investors would be taking an even greater risk in purchasing equity in the company. The ultimate effect would be to significantly raise costs for ratepayers through an increased allowable rate of return.

Customers have a right to expect not only reliable service today, but the expectation of reliable service in the future. Prudent planning costs are "used and useful in rendering service to the public", whether or not a specific project goes forward to completion. Planning and engineering costs such as that spent by Otter Tail Power on the Spiritwood project are "reasonably necessary for the provision of service", and should be given "due consideration to the public need for adequate, efficient and reasonable service" within the meaning of the applicable statute.

In *Senior Citizens Coalition v. Minnesota Public Utilities Commission*, 355 N.W.2d 240, the Minnesota Supreme Court reminded the Commission that, in interpreting the concept of "used . . . in rendering service" it should avoid being overly technical and inflexible in requiring that an item must actually generate, transmit or distribute electricity, or a utility in doing so, in order to be considered used and useful. 355 N.W.2d at 300.

The public interest is best served by a long-run regulatory perspective that allows recovery of capitalized planning costs as used and useful in furnishing service. If investors are denied recovery of or a return on funds devoted to the public good, capital, when required for new plants, will not be available except at very high costs. Such a result is not in the long-run interests of ratepayers. To disallow prudent planning costs where changes in circumstances mandate a different and lower cost alternative would be a disincentive to adequate planning and could preclude the use of base load plants which require planning horizons of many years. Since base load plants are ordinarily the lowest-cost generating alternative, ratepayers would be hurt by a Commission policy unduly jeopardizing long range planning. In issuing its certificate of need for the Spiritwood plant, the North Dakota Public Utilities Commission stated that it would be irresponsible to fail to

provide for forecasted electrical power needs, and that determination is additionally persuasive in making a recommendation to allow recovery for prudently-spent planning and engineering costs. Engineering costs should be allowed because it was prudent to design a system which made possible the recovery of 50 MW of electric capacity to be recaptured from the steam sold to Latish. In addition, OTP followed through with acquisition of the land, which addressed one of the uncertainties cited by the 1982 Commission.

If rate base treatment for engineering and planning costs are denied, the Commission should consider continuing allowance of amortization of these costs as operating expenses.

However, the method of acquiring the land for Spiritwood utilized by the Company was not prudent. In reaching that conclusion, the Administrative Law Judge agrees with the arguments of the Department of Public Service, Office of Attorney General, and Superwood, et al. The Company should have taken more precautions in spending over \$3 million to purchase the 1,460 acres of farmland and for the Spiritwood site. For example, OTP could have, but did not, negotiate an option (for a reasonable fee) whereby the land would be returned to the original owners in case the plant was not built. It did get a one-year option, but that was too short. In addition, there is no evidence that the

Utility attempted to get a commitment from Latish Malting not to use any alternative fuels. There is no evidence that OTP has attempted to rent the land it purchased in anticipation of building Spiritwood, or generate income from that land in any other way since the acquisition. As pointed out in the initial brief of the OAG, the Company's abandonment decision in 1984 was based, in the end, on Latish's decision to use another form of energy for its processing load. The brief cites Otter Tail's 1984 Annual Report, OTP Exhibit 8, at pages 8 and 9, for an admission by the Company that the 1984 decision to cancel the Spiritwood plant was a consequence of Latish's decision to use natural gas. Since the purchase of the Spiritwood land was so heavily tied to use of the steam generated by the plant to power Latish Malting's operation, it is viewed as imprudence for OTP not to have provided for recovering any part of the project costs from Latish when Latish decided not to deploy the earlier-anticipated large increment of electric power.

Big Stone Acquisition and Carrying Charges

38. In March 1986, OTP completed the purchase of an incremental 28 MW in the Big Stone generating station, of which it was already a joint owner and operating partner. This purchase was approved by the Commission in Docket No. E-017/PA-85-125. The purchase increased Otter Tail's percentage of ownership of Big Stone from 47.5 percent to 53.9 percent.

39. The terms of the final purchase were different from the terms of the proposed purchase which had been submitted to the Commission in Docket No. 85-125, in that instead of paying strictly cash for the property, the Company traded certain Federal Energy Regulatory Commission (FERC) jurisdictional transmission plant to a third party for a portion of the property. The consequence of this trade was to reduce the rate base impact of the acquisition.

40. The purchase price of the Big Stone increment was \$667 per kilowatt, which exceeded the net original cost of the increment to its original owner.

41. The DPS proposes exclusion of the entire acquisition adjustment from the rate base to disallow a return to investors on the amount of the Big Stone purchase price which was in excess of the net depreciated original cost of the

plant increment to Northwestern Public Service Company, the original owner.

42. The Big Stone purchase was made to satisfy the requirements of Otter Tail's customers, and the purchase price was less costly than other alternatives. Other opportunities available to Otter Tail ranged in price from \$1 084 per kilowatt to \$1 300 per kilowatt.

43. Otter Tail could not have offered less than \$667 per kilowatt because another party was ready, willing and able to acquire the Otter Tail increment at that price.

44. In Docket No. E-017/PA-85-125, the Commission found that the purchase price was reasonable and in the public interest, and that "while the current market value and price of the Big Stone increment is higher than the embedded net depreciated cost, it is the lowest cost option available to the Company for additional long term capacity".

45. In acquiring the 28 MW of capacity at Big Stone, the Utility made a prudent purchase. The acquisition price of that purchase should be considered the "original cost" of that facility increment for purposes of the Company's taking depreciation thereafter and for allowing a return

46. The DPS recommends disallowance of the total Big Stone acquisition adjustment, including a 100% capitalized expenses from inclusion in the rate base. It recommends a rate base reduction of \$3,401,920. (Exhibit 105, p. 12.)

47. The purchase price of \$667 per kilowatt for acquisition of the 28 MW increment at Big Stone is reasonable. The cost of acquiring that power should be included in the rate base. The DPS recommendation to reduce rate base costs to book value (which would remove \$2,155,075 from the test year rate base) should be rejected.

48. The DPS proposes adjustments to remove certain capitalized components of the acquisition adjustment. The first proposed adjustment is the exclusion of Allowance for Funds used During Construction (AFDC), the capitalized costs of money borne by investors during the period between the purchase and the effective date of rates reflecting that purchase in the rate base. DPS also recommended exclusion of the capitalization of depreciation applicable to the period between the purchase and the effective date of new rates reflecting inclusion of the plant increment, and property taxes for the same period. Finally, the DPS recommended disallowance of the "NWPS Payments" component, which reflects payments made by OTP to Northwestern Public Service to keep open its option to purchase the plant, and to reimburse the costs of capital NWPS was incurring by holding plant that was not in its rate base. Superwood, et al. also recommended exclusion from rate base of the Capitalized AFDC, capitalized depreciation and capitalized property taxes.

49. Capitalization of AFDC recognizes that shareholders have invested funds in plant for the benefit of the ratepayers for which they could

otherwise receive no return until rate base inclusion. However, since the Big Stone increment purchase does not represent monies spent on the construction of new generating plant, it is inappropriate to include the requested AFDC in OTP's test year rate base. The DPS recommendation to exclude \$527,440 of carrying charges, or allowance for funds during construction on the Big Stone capacity for the period from the closing of the sale until the plant is included in rates charged to Otter Tail's customers should be adopted.

50. The DPS recommends removal of \$157,044 for depreciation expense and \$46,422 for associated property taxes from the rate base. OTP argues that the capitalization of depreciation and property taxes recognize that there are costs of ownership of the plant that are properly charged to the ratepayers receiving the benefits of the plant. The DPS position is that capitalization of these items for the time period between purchase and rate base inclusion would result in ratepayers' paying for them twice. However, ratepayers do not pay any expense during the period of capitalization, and once they begin to pay expense there is no further capitalization. Since there is no double recovery, it is appropriate to recognize the capitalization of depreciation and property taxes in the rate base. The DPS recommendation to exclude such carrying charges should be rejected.

51 . The "NWPS Payments" component proposed for addition to rate base by the Company, derived from payments made by Otter Tail to North Western Public

Service to keep open its option to purchase the 28 MW Increment, are appropriate for inclusion in the rate base. The DPS recommendation to exclude \$533,606 for such payments should be rejected.

52. Where inclusion of carrying costs is allowed from the date of acquisition until the plant is included in rate base, the ratepayers are entitled to a revenue credit for sales from the plant during that interim. In this case, OTP proposed a credit of \$17,667 for sales from the plant during the interim period. The amount of that credit should be reduced by the appropriate increment related to non-allowance of AFDC carrying charges.

DISCUSSION

When a utility acquires a property to serve the imminently foreseeable needs of present ratepayers at a fair market price, that acquisition should be treated as a prudent, reasonable purchase in the public interest and the entire price paid should be included in rate base as the original cost of the acquiring utility. Under Minn. Stat. 216B.50, subd. 1, the Commission had to consider the reasonable value of Big Stone when it approved OTP's acquisition of the 28 MW increment. In addition, it had to determine that the acquisition was "consistent with the public interest". Under the ratemaking standards of Minn. Stat. 216.16, subd. 6, the Commission must give due consideration to evidence of the cost of property when first devoted to public use, to prudent acquisition cost to the public utility and to other expenses of a capital nature.

In this case, the Administrative Law Judge is persuaded that the Big Stone purchase price should be capitalized at its original cost which, in this matter, should be viewed as the purchase price, to the extent that such treatment is reasonable.

The Commission should allow OTP's investors to receive a return on the fair market price of property acquired to meet the needs of ratepayers. The acquisition of property made to serve the imminently foreseeable needs of present ratepayers at a fair market price is a prudent, reasonable purchase in the public interest and the price paid should be included in rate base as the original cost to the acquiring utility. Such a statutory interpretation is the only one reasonable under the circumstances of this case.

For authority in opposition to allowance of the acquisition adjustments, the DPS relies in part on the matter of Inter-City Gas Company, PUC Docket No. G-007/GR-83-317, where the Commission excluded an acquisition adjustment

from rate base. In Inter-City, the seller was under financial hardship, and the DPS cites that case for authority that the acquisition adjustment here should not be allowed because OTP could have driven the purchase price down. The situations here and in Inter-City are sufficiently different so as to deny precedential consideration to Inter-City. The seller of the Big Stone increment, NWPS, was not in financial trouble and there was another willing and able purchaser who could and did pay \$667 per kilowatt for another increment. OTP's assertion that the other buyer would have purchased the 28 MW if Otter Tail had not is reasonable. Otter Tail's right of first refusal did not amount to an unconditional right to purchase the Big Stone increment.

The case of Aure Farmers Telephone Cooperative Association, PUC Docket No. P-423-P-600/M-78-1071, is also distinguishable. The purchase involved in

that case involved intangible assets, such as franchises, in addition to physical plant. Here, the purchased asset (28 MW of electrical capacity) is subject to ordinary valuation procedures, such as comparable sales, and the record demonstrates that the price paid was the fair market price.

Both Inter-City and Aure involve the acquisition of additional service territory. The Big Stone purchase is not that type of transaction. The distinction between operating assets purchased for the use and benefit of existing customers, and those purchased in connection with expansion of service area was made by the Iowa Supreme Court in *Office of Consumer Advocate v. Iowa Commerce Commission*, 395 N.W.2d 1 (1986). In that case, the Iowa Commission (as affirmed by the State Supreme Court) approved rate base inclusion of the acquisition adjustment in a case involving the purchase by Interstate Power of a portion of a generating station owned by an Iowa cooperative. Inclusion in the rate base was allowed where the excess payment resulted in some actual benefit to the consumers to justify inclusion of such an amount in the rate base. The benefits included the fact that the purchased capacity was needed to meet future growth and demand, the avoided costs constituted an actual benefit to ratepayers, and the price of the generating capacity was lower than the cost of construction. That situation closely parallels OTP's purchase of the Big Stone increment.

However, the Administrative Law Judge is unable to recommend inclusion of "AFDC" monies in the rate base. Inclusion of an allowance for funds used during construction has traditionally been applied only in situations where the utility is setting aside monies for actual planned construction. The Big Stone transaction was a purchase of power from a generating station that had already been built. AFDC inclusion would be illogical and would constitute an undue expansion of the concept.

Ortonville Plant

53. OTP included a mothballed small generating unit at Ortonville in rate base in its filing, with impact on Minnesota rate base of \$16,597. The Company reasoned that keeping the plant in a condition so that it could be brought back to service in a relatively short period of time, if required, was a justified expenditure and a better planning decision than to abandon the plant.

54. Since the plant is not providing service, the DPS recommends exclusion of monies spent to keep it "mothballed". However, the DPS agrees that OTP investors are entitled to recover their investment in the plant through depreciation, even if they are not entitled to earn a return on it. OTP agreed to the DPS recommendation. The rate base should be reduced by

1 6 , 5 9 7 . The Company made that adjustment in its final rate base proposal.

Reimbursable Construction Work In Progress (CWIP)

55, The Utility requested the amount of \$30,622 in reimbursable construction work in progress for work done to relocate facilities for highway relocations and other reimbursable projects. The OAG recommended an adjustment to remove that amount because OTP will recover those costs from the parties requiring the relocation.

56. The Company has accepted the adjustment recommended by the OAG. The \$30,622 in question has been removed from its final proposal.

Customer Deposits

57. Otter Tail included \$366,728 in customer deposits in test year rate base. This money represents advance payments from customers required to guarantee payment of bills. OTP pays the customer who advances the deposit annual interest at the rate of six percent, as required by the Commission. The Company does not deduct the \$366,728 in average test year customer deposits from rate base nor does it claim interest expense for ratemaking purposes.

58. The DPS recommends removal of the \$366,728 in question from rate base because that money represents non investor-supplied capital on which OTP could then earn its allowed rate of return. The DAG agrees with the DPS recommendation, but also recommends that the cost of service be increased for interest expense of \$22,004 (six percent of \$366,728).

59. The adjustments recommended by the DAG should be adopted.

DISCUSSION

OTP argues that the present treatment of customer deposits has the same effect as the proposal by the OAG. It is reasoned that the Company is paying out in interest essentially what it is earning on the investment of the deposits. While that may be true under present circumstances, interest rates could fluctuate, while the six percent payout to customers for tying up their deposit money would not change unless the Commission charges the requirement. Inequities could result. In addition, inclusion of the \$366,728 in rate base allows OTP's investors to earn a potential return significantly higher than six percent. For these reasons, the adjustments recommended by the Attorney General should be made.

Customer Advances

60. Customer advances are amounts paid by customers to OTP for an extension of service. The Company included \$14,725 for customer advances in test year rate base.

61. The Utility has the use of the customer advanced funds and can use the funds to invest in plant. The DAG argues that this money should be

removed from rate base or OTP will earn a return a ratepayer-supplied funds.

62. Otter Tail agreed that the adjustment proposed by the DAG was reasonable and accepted the adjustment to its rate base, removing the \$14,725 in question from its final proposal. Such treatment of customer advances is reasonable and should be adopted.

Cash Working Capital

63. OTP initially proposed including cash working capital at a zero level in this case, relying on the use of a FERC proposed rule which makes that suggestion. The Company also submitted a lead-lag method cash working capital calculation as a requirement for the Commission's analysis of interim rates.

64. The DPS recommended usage of a lead-lag method to account for cash working capital. The DAG, which originally recommended a balance sheet

approach, later endorsed the DPS recommendation. DPS witness William Lang testified that adjustments to the filed lead-lag study to reflect effects on

cast working capital for DPS proposals, which included compensating and minimum bank balances in the rate base, were reasonable.

65. OTP agreed with the final adjustments suggested by Mr. Lang, which adjustments are consistent with including the specific items allowed by the Commission in the last Otter Tail Power general rate case. All parties have agreed to the use of the lead-lag method of determining cash working capital, and it should be adopted, with appropriate adjustments to reflect the effects on the cash working capital requirement of the Commission's final determination on other issues. OTP has included the presently-adjusted cash working capital amount in its final rate base proposal.

Accumulated Deferred Income Tax (ADIT) Reserve

66. More taxes were collected from OTP's ratepayers and deferred at the pre-1979 48 percent rate than will be due under the current 46 percent tax rate (the federal income tax rate for corporations decreased from 48 percent to 46 percent in 1979).

67. The Company proposes to return the excess accumulated deferred income tax over the life of assets subject to depreciation. The OAG proposes that the accumulated tax reserves be returned over a two-year period, requiring a reduction in the accrued deferred tax reserves (and a corresponding decrease in income tax expense) of \$167,300 for this test year. The effect on rate base would be an increase of \$83,650.

68. A two-year amortization period will more nearly return the funds to the ratepayers who provided the funds than would returning the excess to future ratepayers over the lifetime of the related assets. The OAG's proposal is appropriate and should be adopted.

DISCUSSION

in *Central Telephone Company v. Minnesota Public Utilities Commission*, 356 N.W.2d 696 (Minn. App. 1984), the Court of Appeals upheld a Commission Order adopting a short-term period over which accumulated deferred taxes should be returned to ratepayers. The utility's argument that the excess should be returned over the life of the related assets was rejected. Treatment of these

monies in the fashion suggested by the Attorney General would also be consistent with the Commission's treatment of the same issue in Northern States Power Company (Gas), PUC Docket Nos. G-002/GR-86-160, G-002/M-86-165, issued on January 27, 1987.

Rate Base Summary

69. Otter Tail proposed a test year rate base of \$177,910,503. That amount must be adjusted as follows to provide an appropriate test year rate base of \$176,172,171, calculated as follows:

OTP proposed	\$ 177,910,503
Spiritwood	(927,814)
AFDC-Big Stone	(527,440)
Customer Deposits	(366,728)
Deferred Tax Reserves	83,650_
Net Rate Base	\$ 176,172,171

Operating Income Statement

Research and Development Expenditures

70. Otter Tail included in its budget and in its forecast test year amounts for various research and development expenditures, including \$174,241 that had been budgeted for the Electric Power Research Institute (EPRI

71. As of the time of the hearing, OTP had not decided whether to actually make the budgeted EPRI contribution. The Company presented evidence as to what might happen to the monies if no EPRI contribution is made--that the money will be spent for in-house research on projects such as grain dryer development and/or allocated to research programs the Company already supports at educational institutions in its service area.

72. At the time of filing its initial brief in this case, the Company filed an Affidavit from President John MacFarlane, which affidavit stated that the Company had finally determined not to make a contribution to EPRI in 1986 or 1987. Rather, the \$174,241 originally allocated for EPRI would be allocated among the research and development in-house and university programs mentioned on the hearing record. At the time of filing its Reply Brief, the DPS also filed a Motion to Strike MacFarlane's Affidavit. OTP filed its Reply to that Motion on February 12, 1987.

73. The \$174,241 originally allocated for EPRI contribution should not be included in research and development expenditures during the test year.

DISCUSSION

The \$174,241 allocated for EPRI in the original filing should not be allowed as test year expenditure because the record does not contain substantial evidence establishing where the money will be spent. The general statement that the monies will be allocated among "research and development in-house and university programs" is too vague to support an allowance of those expenditures to increase the revenue deficiency.

The above reasoning was used as a basis for recommended denial of originally-proposed EPRI expenditures because the Administrative Law Judge has decided to deny the DPS Motion to strike President MacFarlane's Affidavit. Testimony was allowed at the hearing for the Company to explain why it might decide (as it eventually did) not to contribute to EPRI. The Company also had an opportunity to explain what would be done if the money was not spent as originally allocated. It is the Judge's opinion that the Commission should

know whether or not the Company finally decided to make the EPRI contribution, and the Affidavit supplies that final bit of information. Therefore, the DPS Motion has been DENIED.

The Pension Fund

74. The issue of funding the pension rights of utility employees was raised in this matter by Superwood, et al. SUP recommends elimination of OTP's pension credit balance of \$847,534, an amount that represents approximately one-half of a year's contribution by the Company to the employee pension fund. This money was accumulated over a ten-year period, and

represents about five percent of ten years' average contribution. The Company considers the accumulated monies to be a prudent "cushion" to provide for unknown variations in the required contribution, such as gains or losses from stock and bond market fluctuations.

75. Superwood, et al. recommend removal from rate case expenses of \$282,511, which is one-third of the above-noted "cushion". In addition, SUP recommends a reduction of \$83,466, to represent the difference between OTP's finally-estimated test year expense (\$1,671,000) for pension funding and the minimum funding required by the Employee Retirement Security Act (ERISA). Finally, SUP recommends an additional removal from allowed expenses of one-third of any credit balance in excess of \$847,534 that has accrued in the account between December 31, 1985 and December 31, 1986.

76. OTP's budgeted test year amount for pension contributions is reasonable. The dedication of a portion of pension fund contributions as a "cushion" to provide for unknown variations in the required contribution is prudent. A soundly-funded pension fund helps stabilize OTP's work force and is a benefit to ratepayers. The recommendation of Superwood, et al. should not be adopted.

DISCUSSION

The large industrial intervenors allege that OTP's pension plan is overfunded by nearly \$13 million. They originally proposed that pension expense contribution should be suspended. This proposal was modified after OTP argued that it would be impossible to suspend contributions to the pension fund for a period of years and concurrently satisfy legal minimum funding standards. SUP's final recommendations are all related to a phasing out of OTP's five percent "cushion".

Superwood's proposal would reduce to the bare legal minimum the annual expense allowable in the test year for pension contributions, and even though that minimum legal contribution can be expected to increase in future years as wages and benefits increase, the allowable expense would remain static for ratemaking purposes throughout the period in which rates are in effect. In the event of an unforeseen decrease in the asset value of the fund, the law

would require increased contributions, for which no available "cushion" would exist.

The plan's assets consist of accumulated contributions plus the earnings on those contributions. The projected rate of earnings is included in the various methods of funding allowable under ERISA. The rate of growth is assumed to continue over the long term at a consistent rate, but it is entirely possible that, in the short run, the rate of growth will vary and could be low or, perhaps, even negative in some periods.

OTP has demonstrated how conditions can fluctuate and, therefore, deployment of a "cushion" of the type currently in its pension plan is necessary. During 1985, assets in the OTP plan earned approximately \$6.5 million more than was anticipated in the actuarial assumption (approximately one-half of SUP's alleged "overfunding"). This actuarial gain caused a reduction in the unfunded liability to be amortized. The effect of the gain was to reduce the 1986 required contribution by \$542,000. However, if the fund had experienced a \$6.5 million "loss" below the actuarial

assumptions, that event would have caused an increase in the same amount in the unfunded liability. if OTP were to make only the minimum contribution allowable in 1986 (\$641,000), the minimum allowable contribution In the following year, under the above scenario, would be \$1.74 million. One purpose of the "cushion" is to be able to make required contributions when conditions fluctuate in such a fashion. Therefore, it is prudent to retain the five percent "cushion", and the Superwood recommendation should not be adopted.

Marketing and Advertising Expenses

77. OTP's marketing plans include the marketing and advertising of dual fuel, dealer aid and appliance rebate programs, ground water heat pumps, and thermal storage systems.

78. Minn. Stat. 216B.16, subd. 8 requires the Commission to disapprove portions of any rate making a direct or indirect allowance for expenses incurred by the Utility to provide public advertisements which are designed primarily to promote consumption of electricity.

79. The Company's advertising for air conditioning and appliances spent on dealer aid advertising are designed primarily to promote consumption of electricity. The \$58,914 in advertising expense related to air conditioning advertising and \$4,997 relating to dealer aid advertising (\$63,911 total), proposed as allowed expenses in this rate case, should be disallowed.

80. Marketing expenses on appliance rebate programs (for water heaters, high efficiency air conditioners, dehumidifiers, clothes dryers, electric ranges and portable electric heaters) are related to advertising that is designed primarily to promote the consumption of electricity. These marketing expenses which total a proposed \$31,950 for inclusion as expenses during the test year, should be disallowed.

81. The Company's dual fuel advertising and advertising for ground water heat pumps are not designed primarily to promote the consumption of electricity. The advertising expenses proposed to be included in the test

year expenses relating to ground water heat pumps and dual fuel should be allowed.

82. Proposed expenses for the marketing of thermal storage systems and ground water heat pumps are not related to advertising that is designed primarily to promote consumption of electricity. The marketing expenses proposed by OTP for inclusion in test year expenses for thermal storage systems and ground water heat pumps should be allowed.

83. Dual fuel advertising is not designed primarily to promote consumption of electricity. Therefore, marketing expenses proposed for inclusion as test year expenses relating to commercial and residential dual fuel should be allowed.

84. As a result of Findings 77-83, OTP's expenses for advertising and marketing for the test year should be reduced by \$95,861.

DISCUSSION

With respect to the consideration of advertising expenses, the Administrative Law Judge has examined all of OTP's ads placed in this record

with a view to assessing whether they are "designed primarily to promote the consumption of (electricity)". The dual fuel advertising primarily stresses how persons who install dual fuel systems can save money by using electricity only during off peak hours. Intervenor DPS and DEED urge that, because only 74,000 of OTP's 92,000 residential customers space-heat with electricity, that the advertising must be aimed at converting to electric heat persons who heat with alternative fuel (primarily oil). DEED also urges denial of dual fuel program expenditures because it expects oil to remain cheaper than electricity for space heating purposes during the time period anticipated to be covered by the new rates.

The test on whether the marketing expenses should be allowed is determined, in great part, by whether the marketed system is cost-effective. Evidence presented by OTP shows the dual fuel program to be effective, with a benefit/cost ratio of 1.47 to 1 and a payback period of 3.8 years. Dual fuel programs are designed to reduce and control peak load growth on OTP's winter peaking system. While it may be true that OTP's revenues will rise if a space-heating customer converts from oil only, the ads in question merely suggest that dual-fuel systems save on electricity. The appeal is for all-electric space-heating customers to consider dual-fuel to avoid electricity use during peak times, or for new homeowners to consider the system in order to save on electricity. It is not OTP's duty to inform the public that oil is cheaper.

The Intervenor recommended the disallowance of \$1,800 for advertising of ground water heat pumps. The only ground water heat pump ad in the record stresses energy savings and is not designed primarily to promote the consumption of electricity. With respect to thermal storage marketing (no recommendation was made by the Intervenor to reduce related advertising expenses), the expense should be allowed because the benefit/cost ratio of the thermal storage program is in excess of 10 to 1. Ground water heat pump marketing expenses should be allowed because such devices have a cost benefit ratio of 5.5 to 1. DEED challenges the cost effectiveness of the ground water heat program. However, its analysis was based on 1983 data about ground water

heat pump models that are not the same as models used in OTP's service areas.
In addition, DEED's calculations were based on the Company's regular residential rate, not on the lower, dual fuel rate,

Otter Tail Power Company has established by a preponderance of the evidence that the expense items recommended for inclusion at Findings 79-86 should be allowed during the test year.

Unbilled Revenues

85. OTP reads its customers' meters on a cycle basis and records the revenues from that reading in the month in which the meters are read, not the month that the related service is provided. Expenses, however, are recorded in the month that related service is provided. As a result, at any one point in time, a mismatch exists between comparable revenues and expenses.

86. The difference in the unbilled revenues that existed at the beginning of the test year and those that will exist at the end of the test year is \$190,000. See OAG Exhibit 67, 21.

87. This mismatch of test year expenses and test year income results in test year revenues that are understated for this test year.

88. Depending on sales volumes, the recognition of unbilled revenue during the test year may have a positive or negative effect on the Company's revenue requirements.

89. Total unbilled revenues at the beginning of the test year, July 1, 1986, were \$3,398,553 for the Minnesota jurisdiction. Such revenues have never been reflected in the ratemaking process.

90. Recognition of the effect of accumulated unbilled revenues would result in a mismatching of revenues and expenses for the test year.

91. No adjustment to test year revenues or deferred taxes is appropriate to recognize the effect of unbilled revenues in prior years, or to recognize the difference between unbilled revenues at the beginning and end of the test year.

DISCUSSION

The proposed adjustments for unbilled revenues consist of two distinct elements and issues. The first issue is whether the unbilled revenues that exist at the beginning of the test year should be amortized. The second issue is whether the change in unbilled revenues during the test year should be recognized in test year revenues. In Docket No. E-002 / GR-8 S- 558 (the last NSP electric rate case), the Commission decided not to allow the adjustments proposed in either category by the OAG. However, in NSP Gas, Docket Nos. G-002/GR-86-180, G-002/M-86-165 (1/27/87), the Commission accepted an adjustment for the "change in margins" during the test year (the difference between unbilled revenues at the beginning and at the end of the test year).

In NSP Gas, the Commission found it appropriate to adjust test year revenues for the change in margins associated with the beginning and end of test year unbilled revenues. It reasoned that the adjustment would theoretically match test year margins with the gas sales that will actually occur in the test year. In theory, adjusting for the change in margins during the test year is the same as eliminating the margins related to unbilled revenues at the beginning of the test year for sales that occur prior to the test year, and including the margins related to unbilled revenues at the end

of the test year for sales that occurred during the test year. In
so
"synchronizing" the margins with other test year operating expenses
and taxes,
and with the test year rate base , the Commission decreased operating
revenue ,
federal and state income taxes and test year operating income by
appropriately-computed amounts. In this case , however , the Admini
nistrative Law
Judge is not persuaded that OAG witness Nelson's proposed margin of \$91
, 761 is
appropriate. Given the uncertain economic history of OTP's service
area, and
looking at recent trends , it cannot be reasonably estimated that
the "margin"
between unbilled revenues at the end of this test year and those at the
beginning would be even a positive number. Given the speculation
inherent in
attempting to predict a margin for OTP , it is recommended that the
Commission
return to its reasoning on this issue as stated in NSP Electric.
In that
case, the Commission found that it was inappropriate to make an
adjustment for
margin because the better matching of revenues and expenses was
offset by the
loss of accuracy through the use of estimates.

Interest Synchronization

92. OTP has budgeted an interest deduction for tax purposes of \$6,412,359. Exhibit 27, Schedule C-3, p. 6 of 8. This calculation does not include in the rate base the Accumulated Deferred Investment Tax Credit (ADITC).

33. Because interest is tax deductible, the failure to consider ADITC interest expense increases the Utility's tax liabilities which it seeks to recover in rates. However, in normalizing its tax credits, OTP offsets its otherwise increased tax liability. As a result, OTP benefits more fully from its ADITC than do ratepayers.

94. To equalize the benefits of the ADITC, OTP's weighted cost of debt should be multiplied by rate base, including ADITC, as recommended by the OAG. As a result of Finding No. 93 OTP's test year operating income should be increased by \$316,368. See initial Brief of Otter Tail Power, p. 64. This figure will be adjusted slightly if the weighted cost of debt and rate base finally determined by the Commission differ from the figures assumed in the Brief.

DISCUSSION

The issue considered in Findings 92-94 is commonly referred to as interest synchronization. On May 22, 1986, the Internal Revenue Service published a final regulation on this subject in the Federal Register, Vol. 51, No. 99, pp. 18775-18778. In its explanation of the adopted regulation (26 C.F.R. Part 1), the IRS states, in part:

In addition, the Service believed that synchronization of interest under section 46(f)(2) would result in an appropriate accounting for the credit in establishing rates.

The Administrative Law Judge interprets the above-quoted Federal Register language to mean that OTP will not lose its eligibility for ADITC if interest synchronization is adopted as the appropriate way of allowing ratepayers to share in benefits derived from that credit. The Commission has recently adopted this position in NSP Electric, Docket No. E-002/GR-85-558, and NSP Gas, Docket Nos. G-002/GR 86-010, G-002/M-86-165.

Miscellaneous

95. OTP's proposed rate case expenses of \$110,000 have not been challenged. The Company has agreed to the OAG's proposal to amortize rate case expenses over two years. The effect is to reduce test year expenses by \$55,000 and increase rate base by \$55,000. Those adjustments were accounted for in the Company's final proposed rate base and operating income.

statements. All parties agree that OTP's sales and revenue forecasts for the test year are reasonable. The figures utilized in those forecasts should be used by the Commission in its computations.

96. The correct Minnesota jurisdictional retail sales forecast (based on rates prior to interim rates) to be used in this record is \$78,627,000 as fixed and shown in the schedules of OTP witness John Erickson. See Exhibit 27 .

Operating Income Summary

97. Otter Tail Power proposed test year operating expenses of \$65,440,512. This amount must be adjusted, as follows, to determine proper test year operating expenses:

OTP proposed	\$ 65,440,512
Spiritwood	(561,657)
Customer Deposits	22,004
Research and Development - EPRI	(174,241)
Advertising and Marketing	(95,861)
Total Operating Expenses	\$ 64,630,757

98. OtterTail's proposed test year total income tax expenses of \$7,873,344. This amount must be adjusted as follows to determine proper test year income tax expenses of:

OTP proposed	\$ 7,873,344
Interest Synchronization	(316,000)
Deferred Tax Reserves	(167,300)
Total income Tax Expense	\$- 7,390,044

99. Otter Tail Power's appropriate test year operating income is \$14,181,753, calculated as follows:

Total Operating Revenue	\$ 86,286,368
Total Operating Expenses	64,630,757
Net Before Taxes	21,655,611
Total Income Tax Expense	7,390,044
Net Operating Income	14,265,567
Allowance for Construction Funds	83,814
Test Year Operating Income	\$14,181,753

Return on Capital

Capital Structure

100. Capital structure is a financial concept which represents the sources of capital to a company. The major sources are debt and equity. The inquiry is to determine what balance between debt and equity is appropriate for ratemaking purposes as being in the best interests of both the Company and its ratepayers.

101. The appropriate mixture of capital is a function of the interaction between the perceived business and financial risks of the Company. The greater the business risk, the higher the proportion of common equity that is appropriate in the capital structure.

102. It is appropriate, for the purposes of this proceeding, to use the actual capital structure of Otter Tail Power Company if that mixture of debt and equity is reasonable. The actual average test year capital structure of Otter Tail Power contains an equity ratio of 45.79 percent of common equity. OTP originally proposed an end of test year capital structure (46.93 percent common equity), but later endorsed the use of an average test year capital structure so as to be consistent with the use of average test year rate base.

103. DPS and OAG support the Company's 45.79 percent common equity ratio as reasonable. Superwood, et al. propose a common equity ratio of 40 percent.

104. OTP's common equity ratio of 45.79 percent shou'd be allowed. That level of common equity is appropriate to maintain investor confidence, maintain current credit Quality and to avoid upward pressure on the Company's cost of capital. Therefore, approval of that ratio is reasonable.

105. The appropriate capital structure for Otter Tall Power Company is as follows:

Long Term Debt	44.041
Preferred Stock	10.17
Common Equity	45.79
	100.00%

DISCUSSION

The DPS and OAG do not argue that a 45.79 percent equity ratio would be unreasonably high. In Docket No. E-002/GR-85-558, the Commission granted a 45 percent common equity ratio for Northern States Power Company, finding that the 45 percent balanced the interests of ratepayers with fairness to NSP. NSP is a larger company than OTP, and has lower risks. The Commission, on January 27, 1987, again approved a 45 percent equity ratio for NSP. See NSP Gas, Docket Nos. G-002/GR-86-160, G-002/M-86-165.

During the recent years of extremely high interest rates, ratepayers are not well served by low equity ratios because new capital has to be financed at higher rates. Financial rating agencies have raised the proportion of equity required for A and AA ratings (Standard & Poor's rates OTP's bonds as A+).

SUP argues that the cost of capital at the present structure is too high. However, if the equity ratio were lower and the debt ratio higher, OTP would have to finance with debt during periods of high debt costs, and its embedded cost of debt would rise.

OTP's test year average actual equity ratio has not been shown to be unreasonably high, and given the Company's smaller size, it is comparable to industry standards for A or AA rated companies. The record shows that Otter

Tail is riskier than the groups of "comparable" or "benchmark" companies to which it was compared by OTP witness Hass and DPS witness Thompson.

SUP witness Dahlen maintains that the Utility should be granted no more common equity ratio than necessary to maintain a AA bond rating. The evidence shows that a 40 percent equity ratio would not be sufficient to maintain such a rating, that OTP is not regarded as financially strong enough to have obtained such a rating, and that a 45.79 percent equity ratio is not in excess of what is necessary to obtain such a rating.

Cost of Debt and Preferred Equity

106. The Company's unchallenged and reasonable cost of debt and cost of preferred equity (derived by using the test year average capital structure) should be adopted as reasonable by the Commission. The weighted cost of debt is 8.7 percent. The weighted cost of preferred equity is 7.16 percent.

Cost of Common Equity

107. The cost of common equity is the return on investment required by an investor in order to induce the purchase of an equity investment in a particular corporation. The discounted cash flow (DCF) method is the appropriate method for determining OTP's cost of equity. DCF analysis determines the cost of equity by combining investors' expectations in the dividend yield and investors' expectations in growth. This method is a market-oriented opportunity cost approach which views the relationship between cost of equity, the investors' income expectations and the market price in a theoretically sound and organized manner.

108. Originally, OTP requested a return on common equity of 14.85 percent--the same return granted to it by the Commission in its last case, decided June 15, 1982. The Company's final proposed recommended rate of return is 13.0 percent. The OTP witness who used the DCF approach in arriving at his recommendation, Dr. Jerome Hass, found that the appropriate return on equity for Otter Tail is between 12.0 and 12.6 percent.

109. Derick O. Dahlen, testifying on behalf of Superwood, et al., recommended a return on common equity of 11.43 percent based on the FERC generic rate of return. However, SUP's final recommendation for rate of return on common equity is 12.0 percent.

110- Dr. Luther Thompson, the DPS witness who employed a DCF methodology in arriving at his recommendation, recommends a rate of return of 12.0 percent on common equity. The OAG and DPS join in supporting Dr. Thompson's recommendation.

111, Two other witnesses on rate of return, Senior Vice President (Finance) Dennis Emmen and Consultant Daniel Rudakas, presented evidence on behalf of OTP. Both recommended an allowed rate of return on common equity greater than that shown by DCF analysis. These witnesses emphasized the greater risks involved for investors in Otter Tail Power compared to the "comparable" utilities used in the DCF analysis computations. Mr. Rudakas also postulated that investors perceive OTP to be a riskier investment than traditional analysis would demonstrate because the potential investors also have an expectation that smaller utilities may be taken over by larger ones, which encourages investors to value the stock of the alleged takeover candidates at a premium. Mr. Emmen recommended a 14.85 percent allowance--the same as OTP received in its last general rate case. OTP's recommendation of 13 percent is a compromise between the 12.0-12.6 percent recommendations employing traditional DCF analysis and the "total growth" approaches recommended by Emmen and Rudakas.

112. The DCF model has two components: the Company's current dividend yield (dividend rate divided by the stock price)--often referred to as "y" and the growth rate (the expected growth in dividends), referred to as "g". The cost of common equity in a DCF analysis is the sum of "y" and "g".

113. The annual growth rate expected by investors is estimated by evaluating historic rates of growth in the Company's dividends, earnings and book value, and by evaluating current information that can reasonably be expected to affect historic growth rates.

114. Dr. Thompson used a comparable group of electric companies to apply the DCF methodology. He concluded that the appropriate dividend yield was in a range of 7-8 percent. Thompson reviewed a range of data, beginning with a current estimate of "y" based on the last 20 stock trading days prior to the [reparation of his testimony, ending September 19, 1986. He looked at the most recent quarter of the year, which was the second quarter of 1986. He looked at the most recent one-year period, which was the third quarter of 1985 through the second quarter of 1986. He also looked at the most recent two-year period, which was the third quarter of 1984 through the second quarter of 1986. By using these four measures of dividend yield, Dr. Thompson Balanced the need for a reflection of the current conditions and investor expectations over a regulatory period.

115. Dr. Thompson calculated a growth rate of three percent to four percent, and used the upper estimate of four percent for his analysis. For "g", he looked at growth rates in dividends per share, in earnings per share, and in book value per share. He placed more value on the more stable growth rates. The time periods over which growth rates were reviewed were a five-year period and a ten-year period. Dr Thompson's Intent in reviewing those two periods was to balance the recent expectations of investors against the tempering effect of long-term stability, producing an average or normalized growth rate.

116. Using OTP data, Dr. Thompson calculated a "y" of seven to eight percent, and a "g" of three to four percent. He concluded that a 12 percent return was reasonable. Using comparable group data, Thompson calculated a "y" of seven to seven and one-half percent, and a "g" of three to five percent. This produced a range of rate of return of 10 to 12.5 percent.

117. Dr. Thompson performed his DCF analysis on the Comparable group in order to verify his Otter Tail calculations. Considering the 12 percent rate of return on common equity derived from Otter Tail data and the comparable group range of 10 percent to 12.5 percent, Dr. Thompson found that 12.0 percent was a reasonable upper limit on the estimated cost of OTP's common equity.

118. OTP witness Dr. Jerome Hass also used the DCF methodology to

calculate the appropriate cost of common equity for Otter Tail. H a
s s
recommended a rate of return on common equity of either 12 percent
(using six
months of data for the yield component) or 12.6 percent (using 12
months of
yield data).

119. Dr. Hass calculated the six-month dividend yield at 6.66
percent and
a twelve-month yield of 7.41 percent.

120. OTP witness Hass's recommendation for the growth factor
is between
four and five percent.

121. The group of companies chosen by Dr. Hass as "comparable" to OTP
differs, in some respects, from that chosen by Dr. Thompson. The
group chosen
by Thompson contains several companies that are larger than OTP.
Since Hass
believes that risk tends to be directly related to size, he finds
OTP to be
more risky than most of the companies in Dr. Thompson's sample. He,
therefore, recommends a somewhat larger cost of common equity than
the average
for the group of companies chosen by Dr. Thompson.

122. Hass's original recommendation was drafted in March of 1986. Since the median dividend yield for the electric utility industry fell by approximately 60 basis points between the filing of his original testimony and his rebuttal testimony, Hass revised his calculations on rebuttal and finally recommended the Commission adopt a "y" figure approximately one percent less than he had originally recommended (using 12 months of yield data).

123. Since five and ten-year growth rates are used with regularity in the financial community, a consideration of the historical five and ten-year growth rates in the growth factors selected for measurement is appropriate.

124. The appropriate dividend yield rate ("y") for use in this proceeding to determine OTP's cost of equity is 7.41 percent.

125. The appropriate growth rate ("g") for use in determining OTP's cost of equity is five percent.

126. As a consequence of Findings 124 and 125, the appropriate cost of equity of Otter Tail Power Company for this rate case is the sum of "y" and .g", or 12.41 percent.

DISCUSSION

Determining the allowed rate of return on common equity for Otter Tail is the most judgmental portion of the entire ratemaking process. *Northwestern Bell Telephone Company v. State*, 299 Minn. 1, 216 N.W.2d 841, 846 (1974). The legal standards governing the exercise of the reasonable judgment necessary for determining the cost of equity in this proceeding were enunciated by the United States Supreme Court in *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944), and *Bluefield Waterworks-and improvements Co. v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923). The general principles governing the determination of a reasonable rate of return on equity for a public utility as derived from *Hope*, *supra*, and *Bluefield*, *supra*, include the concepts that the allowed rate of return must be comparable to that earned on investments and business undertakings that are unregulated but attended by similar risks; the return must be sufficient to enable the utility to maintain its financial integrity; and the return must be sufficient to attract new capital on reasonable terms. Both the Minnesota Public Utilities Commission and the Minnesota courts have adopted the rate of return principles enunciated by the United States Supreme Court in *Hope* and *Bluefield*.

The Commission, in determining a fair rate of return on equity, may balance consumer and investor interests. *Permian Basin Rate Cases*, 390 U.S. 747, 791 (1967). The Commission may not, however, allow less than a reasonable rate of return on common equity in order to accommodate consumer interests. *Bluefield*, *supra*; *Hibbing Taconite Co. v. Public Service Commission*, 302 N.W.2d 5 (Minn. 1980). Moreover, finding a fair rate of return on common equity is a judicial, rather than a quasi-legislative determination.

Minnesota Power and Light Co. v. Public Service Commission, 310 N.W.2d 686 (Minn. 1981).

The Administrative Law Judge considered the testimony of five expert witnesses in determining an appropriate rate of return on common equity for the Utility (Dennis Emmen, Daniel Rudakas and Dr. Jerome Hass for OTP, Dr.

Luther Thompson for the DPS and Derick Dahlen for SUP). The strongest consideration was given to evidence presented by witnesses Hass and Thompson, because they relied on DCF analysis and did not incorporate the "total return" method. The Commission has historically applied DCF analysis to determine the appropriate cost of equity for a regulated utility.

The Administrative Law Judge believes that the data used by Dr. Hass in application of DCF methodology is the most reliable presented in this case. His analysis incorporates data from time periods which are sufficiently current as to reflect current trends, while long enough so as to mitigate the effects of short term aberrations. As stated by Hass in his direct testimony, the Commission has repeatedly employed a twelve-month average in its use of the DCF model as a time period sufficiently long to dampen the effects of short term aberrations in the market. But in a period of declining interest rates, as recently experienced, a shorter averaging period may be more appropriate. On the other hand, there is virtue in having the Commission being consistent over time--it would be unfair to a company to use a three-month average when yields are falling but an eighteen-month average when they are rising. Such biased averaging would ensure that investors would fail to earn the true cost of common equity over the entire cycle. Recognizing both the Commission's precedent and recent trends in the market, Hass used the most recent twelve-month and six-month dividend yields in his testimony. See OTP Exhibit 30, p. 5.

In his subsequent testimony, Dr. Hass allowed for the fact of a drop in the median dividend yield for the electric utility industry between the time of his initial testimony and the filing of his rebuttal. See OTP Exhibit 32, p. 2. The Administrative Law Judge believes that Hass's adjustment on rebuttal, which resulted in a more than 100 basis-point downward adjustment in his recommendation for determination of the "y" factor, was appropriate and added to the witness's credibility.

The Judge also agrees with Hass's choice of comparable companies whose data was used in the DCF calculations. The Administrative Law Judge is

persuaded that the comparable group used by Dr. Thompson is not as reflective of Otter Tail Power's risk situation as that chosen by Dr. Hass because OTP is smaller than several of the companies used in Thompson's analysis. Dr. Hass's testimony that risk is related to size leads to a conclusion that the Company has a somewhat larger cost of common equity than the average for the group of companies chosen by Dr. Thompson. The Administrative Law Judge agrees with Hass's conclusion that, therefore, Thompson's recommended allowed rate of return is too low.

It is appropriate to adopt the high ends of Dr. Hass's finally-recommended yield and growth ranges (7.41 percent and five percent, respectively) because investments in the "comparable" group of utilities chosen by Dr. Hass bear somewhat less risk than investments in OTP. See OTP Exhibit 32, p. 7.

The Administrative Law Judge is also persuaded by Dr. Hass's reasoning in rejecting the 11.43 percent cost of equity recommendation made by Superwood, et al. witness Dahlen. While FERC's benchmark uncapped cost of common equity determination is informative, the very fact that it is a "benchmark" means that its applicability to OTP depends on whether the Company's risks place it with the median firm in the FERC sample. As pointed out by Dr. Hass, Otter Tail is, in many respects, an average utility (A+ bond rating. similar cash

flow coverage of dividends, no nuclear power and a comparable present capital structure). However, Otter Tail is much smaller than the typical utility. That fact, and the character of its service territory (largely agricultural-based with lower prospects for economic growth and prosperity), make an investment in OTP more risky than one in a typical utility, Therefore, a somewhat larger cost of common equity is appropriate. In addition, the FE RC benchmark bases its yield component calculation on a six-month average, as compared to the twelve-month averaging process generally used by the Commission.

Witnesses Emmen and Rudakas found DCF analysis useful but stressed that it should not be relied upon as the sole method for determining cost of equity because, while mathematically precise, in fact it involves a great deal of judgment. They believe a "total return" method reflecting investor expectations of future returns in addition to dividends should be considered. Emmen testified that OTP's high productivity ranking, rate stability for five years, operating availability of plants and excellent service all indicate good management and justify a positive adjustment to the "bare bones" market cost of capital. Rudakas urges consideration of the fact that investors are expecting a total return higher than the stream of dividend income which DCF analysis examines. That return includes an expectation that smaller utilities may be taken over by larger ones, which encourages investors to value the stock of the alleged takeover candidates at a premium. Rudakas and Emmen argue that investor expectations for a total return in excess of the stream of dividends results in an artificially-reduced dividend yield that is used in DCF formulae. While such arguments are persuasive, they should not be controlling. It has been recommended that the Commission continue using DCF analysis to determine appropriate cost of equity. And, for reasons outlined above, the Administrative Law Judge believes that the DCF analysis performed by Otter Tail witness Jerome Hass should be given the greatest weight in the Commission's deliberations.

Cost-of Capital Summary

127. Otter Tail Power Company's appropriate test year overall rate of

return is 10.24 percent, calculated as follows:

Average	Percentage	Cost	Weighted
Long Term Debt	44.04	8.70%	3.83%
Preferred Stock	10.17	7.16	.73
Common Equity	45.79	12.41	5.68
Cost of Capital (Overall Rate of Return)			10.24%

Revenue Deficiency

128. As a consequence of the foregoing Findings regarding rate base, test year operating income and cost of capital, Otter Tail Company's test year revenue deficiency is \$8,119,269, calculated as follows:

	Rate Base	\$	176,172,171
	Rate of Return		10.24%
	Required Operating Income		18,040,030
5 3	Test Year Operating Income		1 4 , 1 8 1 , 7
	Income Deficiency		3,858,277
	(Uncontested) Gross Revenue		
	Conversion Factor		2.104377
6 9	Revenue Deficiency	\$	8 , 1 1 9 , 2

i n its final submission, OTP sought a revenue deficiency of \$11,873,038 (a 15.1 percent overall increase in rates). In its initial filing, the Company sought a \$13 831,243 increase (17.6 percent). The revenue deficiency recommended above of \$8,119,269 would grant the Company a 10.3 percent overall increase in rates.

Concepts to Govern

128. It is the intention of the Administrative Law judge that the concepts set forth in the Findings herein should govern the mathematical and computations aspects of the Findings. Any mathematical or computational errors are unintentional and should be corrected to conform to the concepts expressed in -he Findings.

Dated this day of March, 1987.

RICHARD C. LUIS
Administrative Law judge

Reported: Harold M. Reiner, Allan J. Thiry, Lynn M. Peters, and
Barbara J. Nelson, Court Reporters
Transcripts Prepared

